

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1 1.(original) A system for measuring dynamic force of impacting
2 air/water spray comprising:
3 a pitot-tube section being aligned to receive a longitudinal flow
4 of an impacting spray of air and water in a laterally extending
5 orifice; a first differential pressure transducer being coupled to
6 said pitot-tube section for producing signals representative of
7 velocity of said air/water spray at said orifice;
8 a rain gage section adjacent to said pitot-tube section, said
9 rain gage section receiving and collecting volumes of water of said
10 longitudinal flow of said air/water spray through a laterally
11 extending opening;
12 a second pressure differential transducer coupled to said rain
13 gage section for producing signals representative of said volumes of
14 water collected in said rain gage section; and
15 a computer-based control/readout module connected to receive said
16 velocity representative signals and said water volume representative
17 signals for indicating the magnitude of dynamic force attributed to
18 impacting air/water spray in said opening.

1 2.(original) The system of claim 1 wherein said pitot-tube section has
2 orthogonally interconnected first and second lengths of rigid tubing,
3 and said rain gage section has orthogonally interconnected horizontal
4 and vertical capture tubes.

1
1
1 3.(original) The system of claim 2 wherein said first rigid tubing is
2 aligned with said longitudinal flow of said air/water spray to face
3 said orifice laterally extending across said longitudinal flow of said
4 air/water spray, and said first differential pressure transducer is
5 coupled to said second rigid tubing for producing said velocity
6 representative signals.

7
1 4.(original) The system of claim 3 wherein said horizontal capture
2 tube is aligned with said longitudinal flow of said air/water spray to
3 face said opening laterally extending across said longitudinal flow of
4 said air/water spray to receive and collect water of said air/water
5 spray, said second pressure differential transducer is coupled to said
6 vertical capture tube for producing said water volume representative
7 signals.

1
1 5.(original) The system of claim 4 wherein said first pressure
2 differential transducer produces said velocity representative signals
3 corresponding to pressure at said orifice, said second pressure

4 differential transducer produces said water volume representative
5 signals corresponding to pressure in said vertical pressure tube.

1 6.(original) The system of claim 5 wherein said first and second
2 differential pressure transducers are coupled to receive static
3 ambient pressure.

1 7.(original) The system of claim 6 further comprising:

2 a first purge valve connected to said second rigid tubing and
3 said module to receive said first control purge signal for selectively
4 purging water from said pitot-tube section; and

5 a second purge valve connected to said vertical spray capture
6 tube and said module to receive said second control purge signal for
7 selectively purging collected water volumes from said rain gage
8 section.

1 8.(original) The system of claim 7 wherein said computer-based
2 control/readout module selectively produces first and second control
3 purge signals, said first and second purge signals being selectively
4 coupled to said first and second purge valves, respectively.

1 9.(original) The system of claim 8 wherein said first control purge
2 signal are coupled to said first purge valve for selectively purging
3 water from said pitot-tube section, said second control purge signals

Navy Case No. 84768

are coupled to said second purge valve connected for selectively purging collected water volumes from said rain gage section.

10.(original) The system of claim 9 further comprising:

a pump in said first purge valve to speed up purging of water from said pitot-tube section; and

a pump in said second purge valve to speed up purging of water from said rain gage section.

11.(original) The system of claim 10 further comprising:

lengths of flexible tubing connecting said first and second differential pressure transducers to said static ambient pressure.

12.(original) A system for measuring dynamic force of impacting air/water spray comprising:

means for determining velocity of an impacting spray of air and water, said air/water spray velocity determining means being aligned with the longitudinal flow of said air/water spray, having an laterally extending orifice receiving said air/water spray, and having a first differential pressure transducer for producing a signal representative of velocity of said air/water spray at said orifice;

means adjacent said air/water spray velocity determining means for collecting at least one volume of water, said water volume collecting means being aligned with the longitudinal flow of said air/water spray, having a laterally extending opening to receive and

13 collect water of said air/water spray, and having a second
14 differential pressure transducer for producing a signal representative
15 of a collected volume of water of said air/water spray; and
16 means connected to receive said velocity representative signal
17 from said air/water spray velocity determining means and said water
18 volume representative signal from said water volume collecting means
19 for producing an indication of the magnitude of impacting dynamic
20 force produced.

1 13.(original) The system of claim 11 further comprising:
2 means connected to said air/water spray velocity determining
3 means and said indication producing means for selectively purging any
4 water from said air/water spray that might have collected in said
5 air/water spray velocity determining means; and
6 means connected to said water volume collecting means and said
7 indication producing means for selectively purging said collected
8 volume of water from said water volume collecting means.

9 14.(original) A method of measuring dynamic force of impacting
10 air/water spray comprising the steps of:
11 receiving a longitudinal flow of an impacting spray of air and
12 water in a laterally extending orifice of a pitot-tube section;
13 producing signals representative of pressure representative of
14 velocity of said air/water spray at said orifice by a first
15 differential pressure transducer coupled to said pitot-tube section;

1 receiving and collecting volumes of water of said longitudinal
2 flow of said air/water spray through a laterally extending opening of
3 a rain gage section adjacent to said pitot-tube section;

4 producing signals representative of said volumes of water
5 collected in said rain gage section by a second pressure differential
6 transducer; and

7 indicating the magnitude of dynamic force attributed to impacting
8 air/water spray in said opening by a computer-based control/readout
9 module connected to receive said velocity representative signals and
10 said water volume representative signals.

1
1 15.(original) The method of claim 14 further comprising the steps of:

2 orthogonally interconnecting first and second lengths of rigid
3 tubing in said pitot-tube section; and

4 orthogonally interconnecting horizontal and vertical capture
5 tubes in said rain gage section.

1
1 16.(original) The method of claim 15 further comprising the steps of:

2 aligning said first rigid tubing with said longitudinal flow of
3 said air/water spray to face said orifice laterally extending across
4 said longitudinal flow of said air/water spray; and

5 coupling said first differential pressure transducer to said
6 second rigid tubing for producing said velocity representative
7 signals.

1 17.(original) The method of claim 16 further comprising the steps of:
2 aligning said horizontal capture tube with said longitudinal
3 flow of said air/water spray to face said opening laterally extending
4 across said longitudinal flow of said air/water spray to receive and
5 collect water of said air/water spray; and
6 coupling said second pressure differential transducer to said
7 vertical capture tube for producing said water volume representative
8 signals.

1
1 18.(original) The method of claim 17 further comprising the steps of:
2 producing said velocity representative signals corresponding to
3 pressure at said orifice by said first pressure differential
4 transducer; and
5 producing said water volume representative signals corresponding
6 to pressure in said vertical pressure tube by said second pressure
7 differential transducer.

1
1 19.(currently amended) The method of claim 7 18 further comprising the
2 steps of:
3 coupling first and second control purge signals from said
4 computer-based control/readout module to first and second purge
5 valves, of said pitot-tube section and rain gage section,
6 respectively; and
7 purging water from said pitot-tube section and said rain gage
8 section.

• 20.(original) The method of claim 19 further comprising the steps of:

speeding up the step of purging of water from said pitot-tube section with a pump in said first purge valve; and
speeding up the purging of water from said rain gage section with a pump in said second purge valve.